

POPULATION GROWTH

INTRODUCTION

Families in developing nations are often larger, but less resource intensive (e.g., they use fewer resources per person) than more developed nations. However, an increasing human population having the goal of the "western" standard of living would result in a significant lowering of the potential overall human carrying capacity of the earth. Therefore, in order to reduce their impact as a species, humans must not only reduce the amount of resources that they use per person, they must also reduce their average family size. Determining ways to reduce family size requires a better understanding of the reasons why people choose to have large families in the first place.

There are many factors that affect how large a family is and as a result, how fast a regional population grows. Most of these factors fall under the guise of economic and cultural influences. Depending upon the coinciding or opposing trajectories of cultural values and economic forces, a nation's people can be induced to have larger or smaller families.

Although human population dynamics are often considered on a global scale, factors that affect its growth can be different in different parts of the world. Therefore, it is essential to understand not only the science and economics of the situation, but also the differences in people throughout the world and what motivates their daily lives.

ECONOMIC FACTORS

Some of the factors influencing family size -- and therefore population growth -- are economic ones. These factors are probably the most easily understood. For instance, a rural agricultural family in a developing country that relies upon a water buffalo-pulled plow needs many family members to take care of the planting, harvesting and marketing of crops. A family of three would not provide enough labor to sustain the family business.

In contrast, families in well-developed countries tend to be small for economic reasons. It is expensive to raise children at the relatively high standard of living found in such countries. Considerable money is needed for food, clothes, transportation, entertainment and participation in extra-curricular activities at school. Most of the children eventually go to college, thus adding even more to the expense. Therefore, it is economically prudent in such countries to have fewer children in a family.

Obviously, there are technological and educational ways to negate the need for many children. If the farm family in a developing country buys (or is given) better farming tools, they learn how to better irrigate the land, as well as new

techniques such as crop rotation (e.g., planting different crops in different years to maintain soil fertility and prevent erosion). Acquisition of these new tools and farming techniques will require fewer family members to work the same amount of land. The land may even become more productive, even though less manual labor is required.

Additional economic factors -- such as the cost of medical care and retirement care -- also play a role in family size. If a family is unable to afford adequate medical care, then family planning services and birth control materials may not be readily available. Also, the mortality rates for children may be relatively high. If significant numbers of children do not live to adulthood, there is a strong motivation to have as many children as possible.

This ensures that some of the children will live to help in the family business and perpetuate the family name.

Without national social security programs like those in the United States and Sweden, the elderly in developing countries rely on younger, working members of their families to support them in their retirement. A larger family means a more secure future. On the other hand, national social security programs are expensive. The resulting high taxes imposed on workers, therefore, is also instrumental in limiting family size.

CULTURAL FACTORS

Around the globe, **cultural factors** also influence family size and as a result, impact population growth rate. From a cultural standpoint, religion can have a profound effect on family planning. Many religions promote large families as a way to further the religion or to glorify a higher power. For example, Orthodox Judaism encourages large families in order to perpetuate Judaism. Roman Catholicism promotes large families for the same reason, as well as rejecting the use of any "artificial" means of birth control. Devout followers of a religion with these types of values will often have large families regardless of other factors, such as economic ones. This can be seen in countries like Israel (Judaism) and Brazil (Catholicism), which have high percentages of religious followers in their populations. Both countries have high birth rates and high population growth rates.

Various factors involving women can also affect family sizes. These factors include: education and employment opportunities available to women, the marriage age of women and the societal acceptance of birth control methods. These factors are sometimes controlled by cultural attitudes towards women in a particular society.

Around the world, it can be seen that the higher the level of education achieved by women, the greater the percentage of women who are employed outside the

home; the lower the marriage age of women and the greater the acceptance of birth control methods, the smaller the family size. It is clear that equalizing the levels of education and opportunity for women in the world would reduce overall population growth and improve standards of living worldwide.